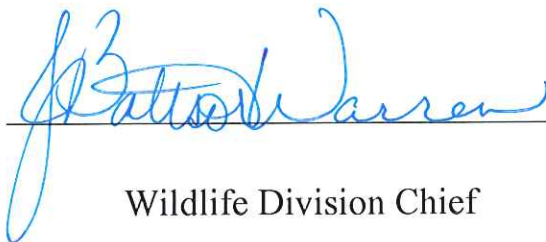



August A. Busch Memorial Conservation Area

Ten-Year Area Management Plan

FY 2016-2025




Wildlife Division Chief


Date

August A. Busch Memorial Conservation Area Management Plan Approval
Page

PLANNING TEAM

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ST LOUIS REGION

RCT Chair


Signature


Date

WILDLIFE DIVISION

Wildlife Management Chief


Signature


Date

OVERVIEW

- **Official Area Name:** August A. Busch Memorial Conservation Area, # 4901
- **Year of Initial Acquisition:** 1947
- **Acreage:** 6,987 acres
- **County:** St. Charles
- **Division with Administrative Responsibility:** Wildlife
- **Division with Maintenance Responsibility:** Wildlife
- **Statements of Purpose:**
 - A. Strategic Direction**

The primary purpose of the August A. Busch Memorial Conservation Area (Busch Memorial CA) is to provide grassland, cropland, woodland and edge habitat that will protect wildlife resources, improve water quality of the area lakes and streams, and promote outdoor recreation.
 - B. Desired Future Condition**

The desired future condition of Busch Memorial CA is a mix of grassland, cropland, woodland and edge habitat surrounding multiple lakes, ponds and wetlands.
 - C. Federal Aid Statement**

This area, or a portion thereof, was developed with Land and Water Conservation Fund dollars to provide land or facilities for public outdoor recreation.

GENERAL INFORMATION AND CONDITIONS

I. Special Considerations

- A. Priority Areas:** The area is part of Audubon Missouri's Busch/Weldon/Howell Conservation Area Complex Important Bird Area.
- B. Natural Areas:** None
- C. Other:** Busch Memorial CA is a natural resource island within Metropolitan St. Louis (population of 2.8 million people). The area is one of the most visited conservation areas in the state and supports a variety of public uses. It has been estimated that Busch Memorial CA annually hosts over a quarter million visitors, with angling accounting for about half of all visits and over 63 percent of all use hours.

II. Important Natural Features and Resources

- A. Species of Conservation Concern:** Species of conservation concern are known from this area. Area Managers should consult the Natural Heritage Database annually and review all management activities with the Natural History Biologist.
- B. Caves:** None

- C. Springs:** Yes, records kept with Missouri Department of Conservation (the Department) Natural History Biologist.
- D. Other:** The Busch Memorial CA is part of the St. Charles County Prairie/Woodland Low Hills landtype association. This landtype is the major component of the area and consists of broad loess-covered hills in the north, which becomes more steep-sided in the south, nearer the Missouri River. Local relief in the north is closer to 100 feet, but rises to nearly 200 feet closer to the Missouri River. Natural and human-induced erosion has deposited loess in the stream valleys. Historically, prairie dominated the uplands and graded into oak savanna and woodland in the valleys. Mixed-hardwood forests occupied the deepest valleys. Today the region is largely urbanized by growth of the St. Louis Metropolitan Area. Non-urbanized lands are largely pasture with occasional cropland. Small isolated stands of second-growth timber are common in rougher lands (Nigh & Schroeder, 2002).

III. Existing Infrastructure

Buildings:

- St. Louis Regional Office
- Main office shop compound
- Chemical storage building
- Stable/field trial barn
- Shooting range office/shop building*
- Shooting range storage buildings (3)*
- Trap houses (3), skeet houses (2), 19-point covered firing range with storage rooms*
- Shooting range observation booth*
- 14-position static archery range with elevated platform (Americans with Disabilities Act (ADA) accessible)
- 2 14-target walk-through archery trails
- Pavilion at archery range (ADA accessible)
- 13 privies (12 cinderblock style, 1 pre-cast); (ADA accessible at Lakes 2, 6, 15, 33 and 34; shooting range; and main office)
- Pavilion and picnic area at main office complex

*The shooting range is currently under renovation and the existing infrastructure will be removed and replaced.

Amenities:

- 95 boats for seasonal rent from local concessionaire

- 4 fishing docks at Lakes 33, 34 (ADA accessible)
- 43 fishing jetties/platforms
- 47 parking lots (ADA accessible concrete pads at Lakes 6, 15, 33 and 34; shooting range; refuge lake; pavilion and main office)
- 15 picnic tables (ADA accessible tables at Lakes 15 and 2, and pavilion)
- 5 viewing blinds (ADA accessible at Refuge Lake and Fallen Oak Trail)

Historic Features:

- 100 storage bunkers from early 1940s as part of the Weldon Spring Ordnance Works, a U.S. Government-owned, contractor-operated facility
- See Appendix for more history

Roads:

- Public/open area roads (1.1 mi. asphalt, 23.4 mi. gravel)
- Service/closed area roads (21.1 mi. gravel)

Trails:

- Fallen Oak Nature Trail (0.7 mi., asphalt surface, hiking only)
- Dardenne Creek Trail (0.4 mi., natural surface, hiking only)
- Pine Trail (0.2 mi., natural surface, hiking only)
- Woodland Trail (0.2 mi., natural surface, hiking only)
- Wildlife Management Trail (0.4 mi., gravel and natural surface, hiking only)
- Prairie Trail (0.2 mi., natural surface, hiking only)
- Busch Hiking and Biking Trail (3.2 mi., gravel surface, hiking and biking)
- Hamburg Trail (1.7 mi., gravel and asphalt surface, hiking and biking)

Lakes:

- 32 man-made lakes with dam and emergency spillways; Lakes 1, 2 and 15 closed to public fishing as part of the Aquatic Resource Education Program; Ahden Knight Hampton Lake and Lake 8 also closed to fishing
- 12 walk-in fishing ponds

Wetlands:

- 2 wetland impoundments (east of Lake 33, flooded via an underground piping system from Lake 33); water control structures
- 2 wetland impoundments (along Dardenne Creek/northeast corner of area); spring-fed; stoplog water control structures

III. Area Restrictions or Limitations

- A. Deed Restrictions or Ownership Considerations:** Department of Natural Resources groundwater use restrictions (Figure 3)
- B. Federal Interest:** This land must provide land/facilities for public outdoor recreation in perpetuity. Federal funds may also be used in the management of this land. Fish and wildlife agencies may not allow recreational activities and related facilities that would interfere with the purpose for which the State is managing the land. Other uses may be acceptable and must be assessed in each specific situation.
- C. Easements:**
- Duckett Creek Sanitary District holds three easements for ingress/egress, utilities and a lift station.
 - Cuivre River Electric Cooperative holds two electric utility easements.
 - St. Charles County Public Water Supply District #2 holds three water transmission main easements.
 - Missouri Highways and Transportation Commission hold four easements for highway and utility purposes.
 - St. Charles County holds one easement for an emergency warning siren.
 - Dardenne Presbyterian Church holds one road easement.
 - AT&T holds one easement for a fiber optic cable at the Shooting Range.
- D. Cultural Resources Findings:** Yes, records kept with the Department Environmental Compliance Specialist. Managers should follow Best Management Practices for Cultural Resources found in the Department Resource Policy Manual.
- E. Hazards and Hazardous Materials:** Contamination of soil and water as a result of previous activities by the Department of Energy and Department of Army. The affected portions were all part of a federal environmental cleanup project and were required to meet certain environmental health and safety standards. The area is now considered to be safe for all recreational pursuits currently allowed on the area, as well as the wildlife found within the area.
- F. Endangered Species:** Endangered Species are known from this area. Area Managers should consult the Natural Heritage Database annually and review all management activities with the Natural History Biologist.
- G. Boundary Issues:** Establishing accurate and identifiable boundary markers is a priority for this property.

MANAGEMENT CONSIDERATIONS

IV. Terrestrial Resource Management Considerations

Challenges and Opportunities:

- 1) Control invasive plant species impacts (e.g., bush honeysuckle, Japanese honeysuckle, garlic mustard, fescue and *Sericea lespedeza*).
- 2) Re-introduce fire into natural communities.
- 3) Manage woodlands to benefit understory herbaceous vegetation.
- 4) Expand the restored prairie/grassland complex and maintain adequate plant diversity in prairie stands.
- 5) Manage the Agricultural Crop Program/open field management and monitor permittee interest.
- 6) Demonstrate to the public the benefits of important habitat management practices (e.g., invasive species control, open field management, prescribed fire, woodland thinning, quail habitat demonstrations, etc.).

Management Objective 1: Maintain high quality natural communities.

Strategy 1: Reduce invasive plant species (e.g., bush honeysuckle, Japanese honeysuckle, garlic mustard, fescue, *Sericea lespedeza*) to levels that will have negligible impact to natural communities. Work to keep invasive plants from invading new areas. Extensive control and follow-up treatment are needed on substantial acreage. This work will be completed using a combination of Department staff, volunteers and contractors. Aerial spraying and other methods will be used as a means to control bush honeysuckle more efficiently. (Wildlife)

Strategy 2: Utilize prescribed fire and other methods to manage herbaceous vegetation in prairies and woodlands, to increase oak regeneration in woodlands, and to control bush honeysuckle and other invasive plants. Area burn plans may be written to include larger burn units that contain multiple habitat types. In addition, burn units will be designed to include areas where bush honeysuckle populations are young or have been previously treated to help prevent re-establishment. (Wildlife)

Management Objective 2: Manage open land resources through the Agricultural Crop Program. If no permittee farmers participate in the program, implement other management techniques to control invasive plants in open fields and provide wildlife food resources.

Strategy 1: Utilize the Agricultural Crop Program to contract with permittee farmers to establish up to 700 acres of row crops annually. Agricultural contracts

will require a sustainable crop rotation system to control invasive plants and provide wildlife food sources. (Wildlife)

Strategy 2: In the event that permittee farming is no longer a technique to maintain open land, manage open lands with a variety of management techniques to provide a diverse array of habitat types consisting of food plots, old fields, reforested areas and early successional weedy fields. (Wildlife)

Management Objective 3: Expand restored prairie/grassland complex located in the south-central part of the area to approximately 300 total acres. Maintain adequate plant diversity in prairie stands.

Strategy 1: Remove agricultural crops from 10 to 20 acres of open land adjacent to the existing grassland complex. Establish prairie grasses and forbs in the area. (Wildlife)

Strategy 2: Remove or thin tree rows between prairie fields to allow establishment of sufficient herbaceous vegetation to allow prescribed fire to help control woody plants. (Wildlife)

Strategy 3: Periodically evaluate restored prairie fields for forb diversity and quantity. If warm-season grasses begin to dominate fields, suppress the grasses through techniques such as disking, herbicide or prescribed fire; and add forb seed to the field. (Wildlife)

Management Objective 4: Provide sites to demonstrate prairie and woodland management and invasive species control. Provide interpretation that exhibits the benefits of proactive management activities to the public.

Strategy 1: Strategically locate some of the projects described in Terrestrial Management Objective 1, Strategies 1 and 2 into areas that are visible to the public, with good opportunities for interpretation (e.g., signage, programs, etc.). (Wildlife)

Management Objective 5: Manage existing woodlands to increase the number and diversity of native herbaceous and woody species.

Strategy 1: Manage woody and herbaceous invasive species (such as bush honeysuckle, multi-flora rose, garlic mustard, etc.) through the use of herbicides, prescribed fire and other methods. (Wildlife)

Strategy 2: Conduct woodland/forest thinning activities to increase mast production and native species diversity. This work is to be conducted after successful management of the larger woody invasive species. (Wildlife)

V. Aquatic Resource Management Considerations

Challenges and Opportunities:

- 1) Maintain adequate fish habitats for healthy sustainable fish populations.
- 2) Portions of streams within Busch Memorial CA have narrow riparian forest buffers.
- 3) Manage wetland pools with water level manipulations and soil disturbance to provide habitat for water birds.
- 4) Some lake dams and wetland levees are too steep to be safely maintained or suffer from erosion or muskrat damage.
- 5) Siltation in some lake emergency spillways has increased lake water levels creating dam safety concerns.
- 6) Some lakes suffer from siltation and have become shallow.
- 7) Future development of neighboring grounds will further increase quantity of stormwater and silt inputs to area lakes and streams.
- 8) The Lake 8 basin has a chronic leak, which reduces fishery management abilities and has been designated a dog training lake.
- 9) Hampton (Refuge) Lake has become shallow and overgrown with vegetation, limiting its use. It could be renovated for Aquatic Resource Education, special events (Wetland for Kids) and naturalist programming use.
- 10) Explore potential for additional wetland habitat.
- 11) Explore opportunities to construct larger lake sites.

Management Objective 1: Manage wetland pools with water level manipulations and soil disturbance to provide habitat for waterbirds.

Strategy 1: Manipulate water levels in the wetland pools through use of the water control structures to provide shallow flooded habitat during fall and spring waterbird migration. (Wildlife)

Strategy 2: Use soil disturbance to control invasive plants and to stimulate beneficial moist soil plants as a food source for migratory waterbirds. (Wildlife)

Management Objective 2: Expand wetland acreage on the Busch Memorial CA.

Strategy 1: Explore the feasibility of utilizing material from current oversized levees at the Lake 33 wetland complex to construct low profile levees south of the existing wetland complex. Install water control structures to allow for water level manipulation. (Design and Development, Wildlife)

Strategy 2: Explore options to pro-actively manage stormwater and other water inputs from neighboring lands along northern and western boundaries through

construction of fishless, detention/retention basins or opportunistic wetlands.
(Wildlife, Fisheries)

Strategy 3: Explore options for wetland attributes during the potential conversion of Lake 8 to dog training facility. (Wildlife)

Strategy 4: Explore options for opportunistic wetlands around Kraut Run and north of Dardenne Creek. (Wildlife)

Management Objective 3: Establish, maintain or expand lake and stream habitats.

Strategy 1: Develop lake basin renovation projects for lakes suffering from excessive siltation (Appendix A). (Fisheries)

Strategy 2: When renovating lakes, build a variety of depths, deep channels, spawning structures, rock piles and shoreline diversity. Armor dam faces with rock rip-rap. (Fisheries)

Strategy 3: Install and/or maintain brush piles, hinged shoreline trees, and wooden pallet structures in lakes managed for multiple fish species. (Fisheries)

Strategy 4: Establish and maintain appropriate native aquatic vegetation in lakes. (Fisheries)

Strategy 5: Conduct lake site search and explore opportunities to construct larger (>20 acres) lakes on appropriate sites. (Fisheries)

Strategy 6: Explore options to provide hypolimnetic aeration to at least two lakes to improve oxygen levels for cool/cold water species. (Fisheries)

Strategy 7: Survey depths of up to 12 walk-in ponds to determine need for renovation. Develop renovation projects, as needed. (Fisheries)

Strategy 8: Conserve, expand or establish riparian forest buffers to a minimum of 100-foot wide, on both sides of Busch Memorial CA area streams, according to Department riparian guidelines (Missouri Department of Conservation, 2009). (Wildlife)

Management Objective 4: Improve lake embankments and spillways.

Strategy 1: Improve dam maintenance safety by decreasing backside slopes to a minimum 3:1 ratio at four lakes (Appendix A). (Fisheries)

Strategy 2: Improve protection of dam faces, and decrease shoreline and bank erosion by developing stabilization projects including armoring with rock to eliminate damage from wind/waves and burrowing animals at up to nine lakes (Appendix A). (Fisheries)

Strategy 3: Renovate primary and emergency spillway elevations to improve drainage on up to nine lakes (Appendix A). (Fisheries)

VI. Public Use Management Considerations

Challenges and Opportunities:

- 1) Busch Memorial CA is one of the most heavily-used conservation areas in Missouri.
- 2) Educate diverse users about area use regulations related to hunting, trapping, fishing and other recreational activities.
- 3) Provide a diverse array of hunting, trapping and fishing opportunities for a wide variety of species on a high public use area.
- 4) Manage multiple public user group activities to avoid conflicts between groups.
- 5) The area includes considerable infrastructure (lakes, roads, trails, etc.), which require significant maintenance.
- 6) Aquatic Resource Education use by schools is heavy and increasing.
- 7) The concessionaire and rental boat programs are popular with anglers.
- 8) Conduct a visitor use survey in partnership, with Policy Coordination, Outreach and Education and Resource Science Divisions, to better understand and meet intense and increasing demand for public use.
- 9) The Busch Memorial CA has been identified as a crucial component of the Great Rivers Greenway trail program, which could potentially link several greenways in St. Charles and St. Louis counties.
- 10) Determine the feasibility of developing an educational outdoor campus through renovation of the Hampton Lake area and connection to the St. Louis Regional Office complex and the Lake 1, 2, 15 Aquatic Resource Education complex.
- 11) Several lakes could provide more grounds maintenance for families that desire more park-like angling experiences.
- 12) Disabled angler access could be improved.
- 13) Provide dog training opportunities while maintaining fish and wildlife habitat.
- 14) Current firearms range is undergoing renovation to update the facility, minimize lead contamination and enlarge the range (i.e., to handle increased use).
- 15) Maintain communication with internal and external stakeholders on the range construction progress.
- 16) Continue to provide hunting/shooting programs to the public.
- 17) Recently renovated unstaffed archery range includes static range, ADA-accessible shooting platform and two 14-target walk-through archery trails.

Management Objective 1: Educate area users through a variety of media (e.g., area brochures, Department website, area signage) about area regulations to reduce Wildlife Code violations and enhance enjoyment of area resources.

Strategy 1: Maintain area signage (boundary, fishing regulation, service road, etc.) to inform the public and reduce violations. (Wildlife)

Strategy 2: Explore options to install interpretive signage to inform area users about habitat management practices and techniques. (Wildlife)

Management Objective 2: Provide sustainable hunting opportunities for a wide variety of species on a high public use area.

Strategy 1: Conduct managed hunts for deer, turkey and waterfowl to control hunting pressure. (Wildlife)

Strategy 2: In the future, should beagle field trials no longer take place on the area, consider removing the Special Rabbit Management Zone to increase rabbit hunting opportunities for the general public. (Wildlife)

Management Objective 3: Maintain healthy deer populations to provide ample hunting opportunities.

Strategy 1: Conduct spotlight deer surveys and aerial surveys of deer population on the area to periodically assess density. (Wildlife)

Strategy 2: Conduct a variety of managed hunts to help manage deer numbers and provide several options for hunters to enjoy the resource. (Wildlife)

Management Objective 4: Manage large user groups or user groups with special requirements through the Special Use Permit program to help avoid conflicts between groups.

Strategy 1: Utilize Special Use Permits to schedule field trial and hunt test activities to ensure adequate sharing of the resource. (Wildlife)

Strategy 2: Follow Department Special Use Permit guidance when evaluating Special Use Permit applications to determine if activities can be allowed or not. (Wildlife)

Strategy 3: Maintain Lakes 1, 2, 12 and 15 as Aquatic Resource Education lakes. Do not permit dog training and field trials on these lakes. (Fisheries, Wildlife)

Strategy 4: Maintain Lake 8 as a designated dog training lake closed to fishing. Dog training and field trials will be permitted on all other Busch Memorial CA lakes, except for lakes hosting winter trout (November through March at Lakes 3, 21, 22, 23 and 28), intensive channel catfish (April through September at Lakes 3, 4, 5, 7 and 23) stockings, and Ahden Knight Hampton Lake. Additionally, dog training and field trials on all newly constructed and renovated lakes will be evaluated based on future management of the lake. (Wildlife)

Strategy 5: Maintain existing private concessionaire program. (Fisheries)

Strategy 6: Maintain existing rental boat program to be operated by concessionaire. (Wildlife)

Strategy 7: Explore opportunity to simplify use of Aquatic Resource Education lakes, e.g., Lakes 1, 2, 12, 15 and Hampton (Refuge) Lake; if renovated, replace need for Special Use Permits with existing lake reservation system guideline forms. (Fisheries)

Management Objective 5: Maintain restrooms, buildings, roads, mowed areas, trails, and other developed areas in a manner that promotes the aesthetics and utility of these resources.

Strategy 1: Utilize contractors, when appropriate, to perform routine trash pickup, cleaning, mowing and other activities that maintain the aesthetics and utility of area amenities. (Wildlife)

Strategy 2: Ensure area signage is maintained on a continual basis to assist the public with navigating the area road network and other features. (Wildlife)

Strategy 3: Manage grounds surrounding up to 13 lakes through increased mowing frequency, reduced shoreline brush, improved tree shade quality, and improved access for Aquatic Resource Education programming and enhanced family fishing opportunities. (Wildlife)

Strategy 4: Consider developing project proposals to improve disabled angler access at up to six lakes. (Fisheries)

Strategy 5: Consider clearing shorelines and increase mowing frequency at up to 12 walk-in fishing ponds. (Fisheries)

Management Objective 6: Provide high-quality fishing opportunities for a wide variety of fish species.

Strategy 1: Maintain multi-species fish communities in at least 25 lakes (Figure 4). (Fisheries)

Strategy 2: Maintain year-round catch-and-release fishing opportunities on at least three lakes (Appendix A). (Fisheries)

Strategy 3: Investigate possibilities of reducing the number of lakes intensively stocked (at least 400 fish per acre per year) with channel catfish. (Fisheries)

Strategy 4: Maintain channel catfish opportunities at up to 26 lakes through annual stockings of at least 30 fish per acre per year. (Appendix A). (Fisheries)

Strategy 5: Maintain special winter trout opportunities through stocking program at two lakes using catch-and-release regulations with annual stocking rates of 400 fish per acre per year and up to three lakes using statewide harvest regulations with annual stocking rate of 700 fish per acre per year (Appendix A). (Fisheries)

Strategy 6: Provide high-quality largemouth bass fishing in up to 15 fishing lakes (Appendix A). (Fisheries)

Strategy 7: Provide high-quality panfish (bluegill, crappie and/or redear sunfish) fishing in up to 12 fishing lakes (Appendix A). (Fisheries)

Strategy 8: Increase or maintain diversity of specialty sportfish species through special management in at least eight lakes for muskie, hybrid striped bass, trout and flathead catfish (Appendix A). (Fisheries)

Strategy 9: Explore the possibility of creating temporary special angling regulations to reduce overcrowded largemouth bass populations. (Fisheries)

Strategy 10: Survey and evaluate fish communities, in up to 12 walk-in fishing ponds and Dardenne Creek within the Busch Memorial CA, to determine best management options. (Fisheries)

Management Objective 7: Provide exceptional regional Aquatic Resource Education and angler recruitment opportunities.

Strategy 1: Design and construct a Capital Improvement project to upgrade restroom, shelter, access, parking, lake shoreline, trail, wetland, fishless pond and ADA facilities surrounding Lakes 1, 2 and 15. (Fisheries)

Strategy 2: Explore the possibility of renovating and adapting Hampton (Refuge) Lake for increasing Aquatic Resource Education, naturalist programming and special event use. Connect this area to Regional Office and Lakes 1, 2 and 15 with trails. (Outreach and Education)

Strategy 3: Utilize Aquatic Resource Education facilities in Department angler recruitment programming. (Fisheries)

Strategy 4: Maintain Lake 12 as “kids only” and Aquatic Resource Education lake. (Fisheries)

Management Objective 8: Provide dog training opportunities while maintaining fish and wildlife habitat.

Strategy 1: When performing lake renovations, look for ways to incorporate features that will enhance dog training opportunities, when appropriate, based on management objectives. (Fisheries)

Strategy 2: When performing wildlife habitat management in known training and field trial areas, visit with local dog trial clubs to discuss management objectives and potential impacts to dog training and field trial use. (Wildlife)

Strategy 3: Continue to keep the Special Rabbit Management Zone posted with no hunting signs to close the area to rabbit hunting, except for youth hunters, which should result in higher rabbit populations to support beagle field trials. (Wildlife)

Management Objective 9: Conduct a public use survey to better understand and meet the intense and increasing demand for public use.

Strategy 1: Work with Policy Coordination, Outreach and Education, and Resource Science Divisions to develop and implement a public use survey by FY2020. (Wildlife, Fisheries, Outreach and Education)

Management Objective 10: Renovate existing shooting range.

Strategy 1: The facility closed Jan. 1, 2015, for a period of 24 to 30 months. This will include a two-phase process: Phase I is demolition of the current facility and lead reclamation. Phase II is construction of the new range, which will include the following:

- 100-yard range with 20 firing points and 50-yard range with 15 firing points including baffling and ADA accessibility.
- Education building for the purpose of conducting firearms and hunting programs.
- Static line archery range with one shooting tower and two broadhead pits that are ADA accessible.
- Two shotgun patterning ranges with capability to pattern up to 40 yards.
- Five combination trap/skeet ranges, including two with five-stand capability, and meeting Amateur Trapshooting Association and National Skeet Shooting Association standards. (Outreach and Education)

Management Objective 11: Maintain communication with internal and external stakeholders regarding the shooting range renovation.

Strategy 1: Utilize the Department website and on-site construction cameras to allow the public to follow the progress of construction. (Outreach and Education)

Strategy 2: Utilize a Department blog for public questions and comments concerning the renovation. (Outreach and Education)

Strategy 3: Provide quarterly updates on the progress of construction through email, the Conservation Connections and the Department website. (Outreach and Education)

Management Objective 12: Continue to provide hunting/shooting programs to the public.

Strategy 1: During construction, utilize classroom facilities at the St. Louis Regional Office and at Henges Shooting Range and Outdoor Education Center to

conduct hunting and shooting programs and Hunter Education classes. (Outreach and Education)

Strategy 2: After construction is completed, explore ways to use the new facility to increase the amount and types of shooting and hunting programs that are offered. Use these programs as a recruitment tool for new hunters and shooters. (Outreach and Education)

Management Objective 13: After construction is completed, maintain the on-site archery range and the unstaffed archery range at Busch Memorial CA according to Shooting Range Facilities Program Manual guidelines.

Strategy 1: Perform weekly maintenance to ensure target butts are operational and paper targets are replaced. (Outreach and Education)

Strategy 2: Weekly monitor routine maintenance needs (mowing, litter control and privy cleaning). Utilize contractors, when appropriate, to perform maintenance tasks. (Outreach and Education)

Strategy 3: Mow and inspect the archery range boundary for repairs yearly and replace signage as necessary. (Outreach and Education, Wildlife)

VII. Administrative Considerations

Challenges and Opportunities:

- 1) Encroachment by neighboring homeowners, leading to tree cutting, yard waste dumping and other activities along property boundaries.
- 2) Explore feasibility for modern restroom facilities strategically located through the area and eliminate pit-style privy restroom facilities.

Management Objective 1: Maintain well marked, accurate boundary lines.

Strategy 1: Maintain signage along boundary lines every five years. (Wildlife)

Strategy 2: Work with neighboring homeowners to provide education about area regulations and request compliance. (Wildlife, Protection)

Strategy 3: Obtain administrative guidance on resolving minor boundary issues. (Wildlife)

Management Objective 2: Replace existing pit privies with fewer and more modern, low maintenance restroom facilities.

Strategy 1: Investigate feasibility of removing existing pit privies and replacing with up to six modern restroom facilities during budgeting process. (Wildlife, Design and Development)

Strategy 2: Investigate opportunities to use solar-powered restrooms with access to water. (Wildlife, Design and Development)

MANAGEMENT TIMETABLE

Strategies are considered ongoing unless listed in the following table:

	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25
Aquatic Resource Management										
<i>Objective 3</i>										
Strategy 5							X	X		
Strategy 8		X	X							
<i>Objective 4</i>										
Strategy 1		X	X	X	X	X				
Strategy 2		X	X	X	X	X				
Strategy 3		X	X	X	X	X				
Public Use Management										
<i>Objective 6</i>										
Strategy 3	X	X	X							
<i>Objective 7</i>										
Strategy 1		X	X	X						
<i>Objective 9</i>										
Strategy 1					X					
<i>Objective 10</i>										
Strategy 1	X	X	X							
<i>Objective 12</i>										
Strategy 1	X	X	X							
Administrative Considerations										
<i>Objective 1</i>										
Strategy 1		X					X			

APPENDICES

Area Background:

The August A. Busch Memorial Conservation Area was purchased by the Missouri Department of Conservation in 1947 from the federal government. Mrs. August A. Busch, Sr. donated a portion (\$70,000) of the cost toward the purchase of the area as a memorial to her late husband.

In the early 1940s, the area was used by the U. S. Army as a TNT munitions plant to support the World War II effort. There are still 100 of the old TNT storage bunkers that exist on the area.

The Department encourages recreational use of the area by the public, while furnishing fish and wildlife with the resources necessary to be healthy and abundant. We encourage the public to walk the hiking trails, drive the auto tour, photograph the wildlife or simply sit under a tree and enjoy the sights and sounds of the outdoors.

Hunting for a variety of wildlife species is allowed on the area. Special regulations exist for most of the hunting activities. Check the Area Regulations section or the area office for current regulations.

Portions of the Busch Memorial CA were used by the U. S. Department of Army in the 1940s for TNT and DNT production and by the Atomic Energy Commission in the 1960s for uranium ore processing. The affected portions were part of a federal environmental cleanup project and were required to meet environmental health and safety standards. The area is now considered to be safe for all recreational pursuits allowed on the area, as well as the wildlife found within the area. To find out more about the history of these activities on the area, you can visit the Weldon Spring Site Interpretive Center located at 7295 Highway 94 South, St. Charles, Missouri.

Current Land and Water Types:

Land/Water Type	Acres	Miles	% of Area
Woodland	4,400		63
Cropland/Hay Land	967		14
Old Fields/Upland Fields	530		8
Impounded Water	470		7
Warm Season Grass Fields	290		4
Bottomland/Riparian Forest	240		3
Wetland	90		1
Total	6,987		100
Stream Frontage		4.7	

Public Input Summary:

The draft Busch Memorial Conservation Area Management Plan was available for a public comment period May 1–31, 2015. The Missouri Department of Conservation received comments from 16 respondents (Appendix B). The Busch Memorial Conservation Area Planning Team carefully reviewed and considered these ideas as they finalized this document. A brief summary of public input themes, including how they were incorporated or why they were not, can be found below. Rather than respond to each individual comment, comments are grouped into general themes and are addressed collectively.

Prior to writing this draft area management plan, the Department conducted a public input process (the August A. Busch Memorial Conservation Area Idea Gathering Stage) from Oct. 1–31, 2014. During this “idea gathering” stage, the Department received input from 22 respondents (see “August A. Busch Memorial Conservation Area Idea Gathering Stage Public Input Summary” at <http://mdc.mo.gov/node/27589>). The area management planning team took comments into consideration as they drafted this 10-year management plan for Busch Memorial Conservation Area. Department responses to comments received during the October 2014 idea gathering stage can be found in the report, *Missouri Department of Conservation Responses to Public Comments – August A. Busch Memorial Conservation Area Idea Gathering Stage*. This report is available upon request by contacting Amy Buechler (amy.buechler@mdc.mo.gov).

Department responses to themes and issues identified through Busch Memorial Conservation Area public comment period

Terrestrial Resource Management**Suggests increasing amount of agricultural fields to benefit wildlife.**

The area is managed for a variety of habitats which includes a mix of agricultural, idle fields, woodlands, grasslands, and wetlands to support many different wildlife species. The Department is working to reduce the amount of large grain agriculture on many conservation areas to provide better natural community habitat for wildlife.

Concern with too many crop fields. Suggests small food plots instead.

The area is managed for a variety of habitats which includes a mix of agricultural, idle fields, woodlands, grasslands, and wetlands to support many different wildlife species. The Department is working to reduce the amount of large grain agriculture on many conservation areas to provide better natural community habitat for wildlife.

Suggests incorporating timber stand improvement and timber harvest to benefit wildlife.

Current efforts are being concentrated to reduce invasive species, especially bush honeysuckle, from woodlands on the area. The Department has also initiated woodland thinning activities on

the area and will increase those activities after bush honeysuckle and other invasive plant populations are reduced.

Suggests more mowing or burning of fields before July.

Mowing and burning from mid-March through mid-July is minimized to reduce disturbance to wildlife, especially ground nesting mammals and birds.

Suggests public notification when chemicals are applied around lakes and roadsides.

The Department is currently looking into a way to notify area users when and where herbicides are being used on the area.

Concern that lake areas have been overgrown with trees.

During 2014, shorelines were cleared for better access at Busch lakes 11, 12, 21, 22, 23, 30, and 36. Improved access to fishing opportunities is an emphasis in the updated area plan.

Public Use Management

Suggests allowing horseback riding. Suggests developing a multi-use trail in the northwest portion of the area. Volunteers to help with trail maintenance. Recognizes that trails may need to be closed during certain hunting seasons.

The area north of the Dardenne Creek does not have a good public access point other than crossing the creek, which would likely cause water quality issues. Also, horseback riding opportunities are offered on other conservation areas throughout the Region as well as at various state and county parks in the Region, including nearby at St. Charles County Broemmelsiek Park.

Concern that best retriever lakes have been taken away and current retriever lake is not useable.

Staff has been working with local field trial clubs to increase access around several of the area lakes to better facilitate field trial and dog training activities. Also, management projects for the area surrounding Lake 8 are planned and, depending on money and staff time, should begin by the end of 2015.

Suggests adding a dock at Lake 35.

Busch Lake 35 currently has 3 fishing jetties. These jetties often provide fishing opportunities similar to fishing docks. Additional fishing docks are dependent on available funding, however the Department will investigate the potential for adding a dock at Lake 35.

Administrative Considerations

Concern with dust on road to Lake 33. Suggests paving road or providing an additional entrance to redistribute traffic. Suggests opening additional roads currently closed to public to reduce traffic.

The Department understands that there can sometimes be excessive dust along area roads. The Department will investigate alternative road surfaces, but due to the extensive road network in the area (more than 20 miles of roads), budget constraints must be considered and weighed against other priority projects across the state. Currently, with one public vehicle access onto the area, we are better able to manage general public access and access for special events. Also, there could likely be issues with constructing a second access along Route D due to MODOT restrictions on sight lines. Opening additional roads would result in increased maintenance costs and many of the currently closed roads would require extensive improvements to make them safe for vehicle traffic.

Suggests updating lakeside privies.

A request to replace many of the privies on the area has been submitted and these replacements should occur over the next few years.

Concern with limited parking away from lakes.

Parking areas are based on the predominant area uses, so most parking areas are located near lakes and area trails. However, parking is allowed along roadsides as long as weather conditions allow and it does not impede the flow of traffic.

Suggests increased access and parking for people with mobility disabilities.

Improved access to fishing opportunities is an emphasis in the updated area plan.

Concern with potential hazards from Weldon Spring munitions site.

The area meets environmental and safety standards set for the area and is considered safe for recreational activities. The area is also continually monitored through several groundwater wells to ensure these safety standards continue to be met.

Suggests more trash containers at all lakes.

There are currently trash dumpsters at many of the high use lakes and several other locations throughout the area.

References:

Missouri Department of Conservation. (2009). *Watershed and stream management guidelines for lands and water managed by Missouri Department of Conservation*. Jefferson City, Missouri: Missouri Department of Conservation.

Nigh, T. A., & Schroeder, W. A. (2002). *Atlas of Missouri ecoregions*. Missouri: Missouri Department of Conservation.

Maps:

Figure 1: Area Map

Figure 2: Aerial Map

Figure 3: Department of Natural Resources Drilling Restrictions

Additional Appendices:

Appendix A: Busch Memorial CA Lakes and Ponds

Appendix B: August A. Busch Memorial Conservation Area Management Plan Public Comments

Figure 1: Area Map

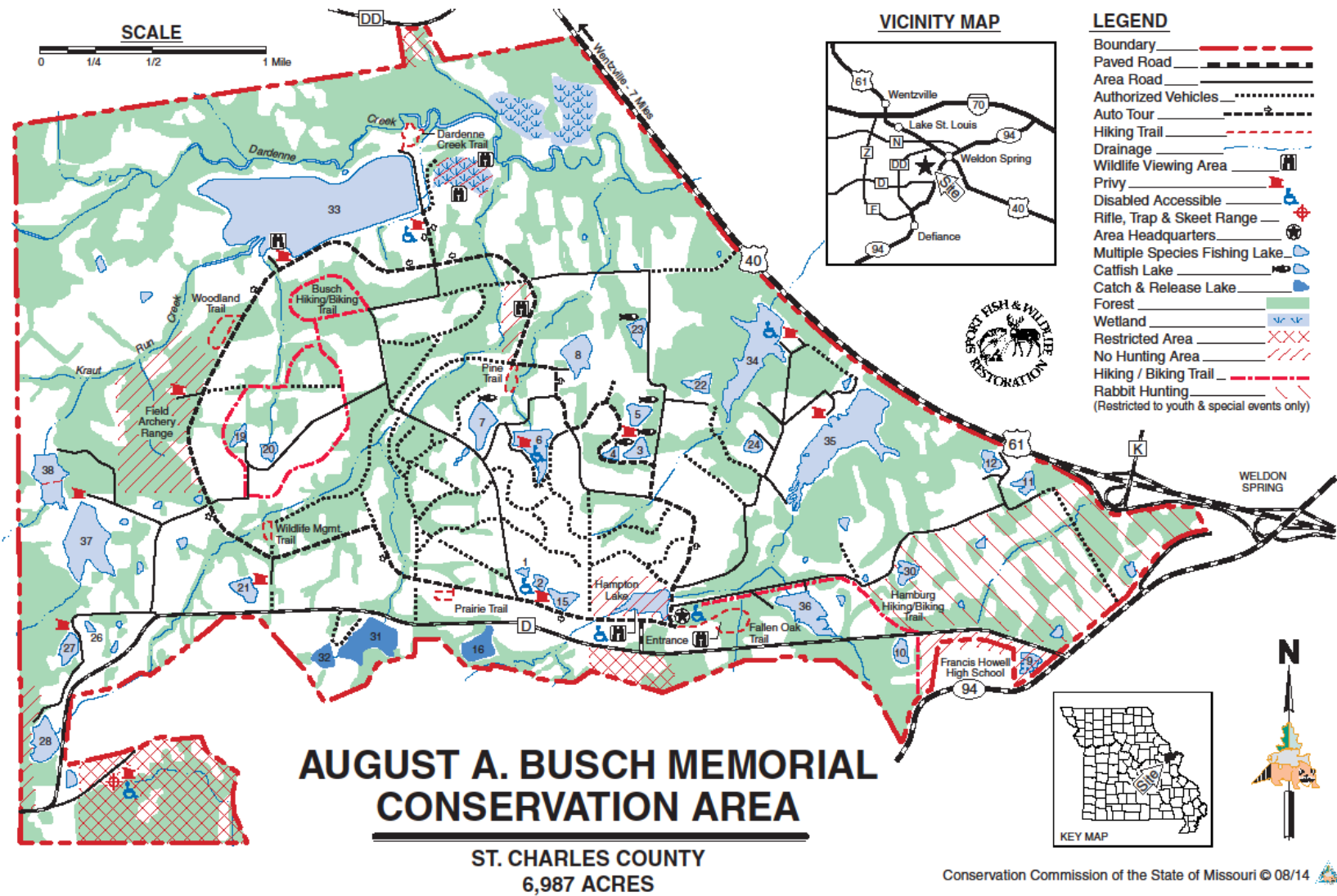


Figure 2: Aerial Map

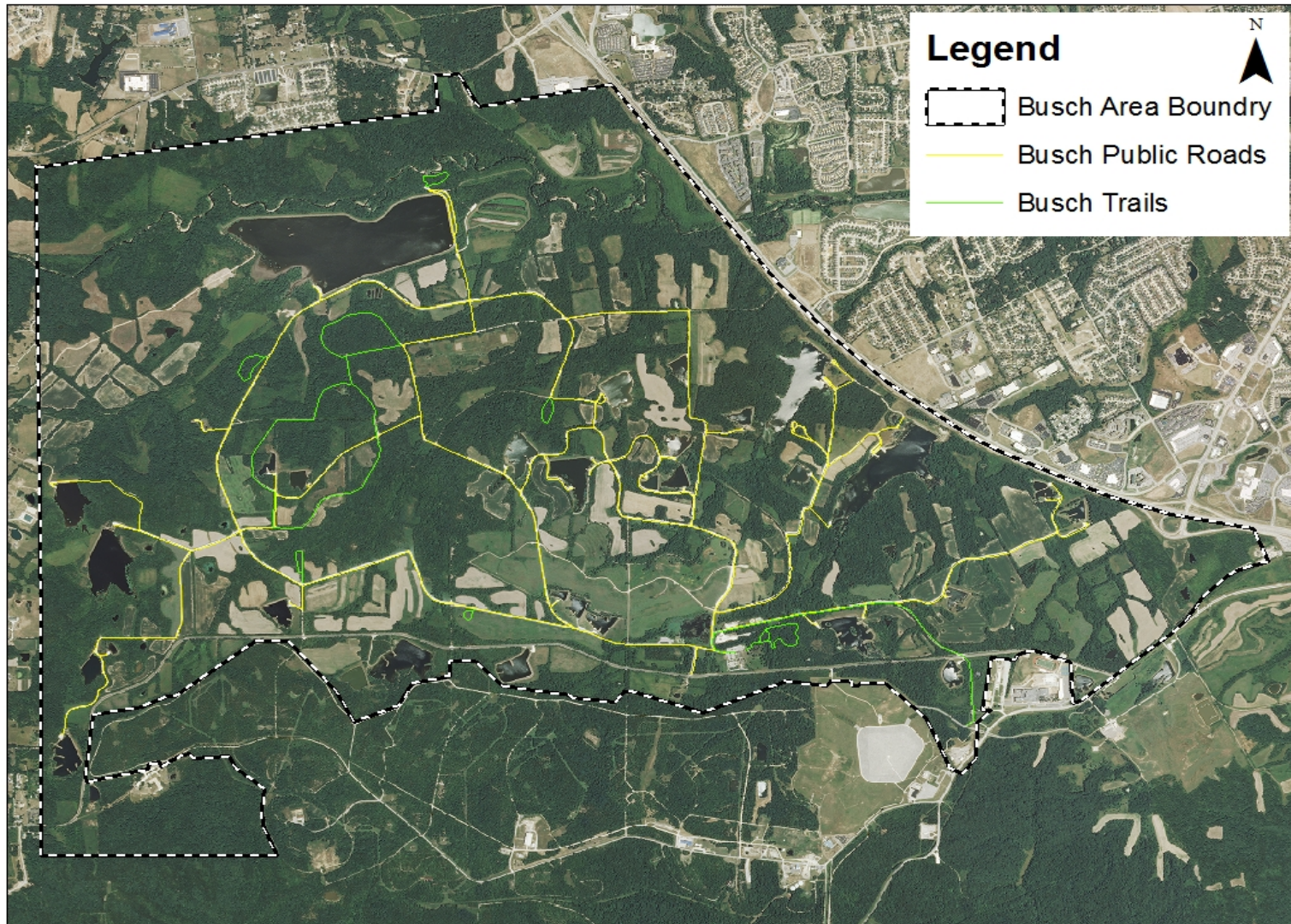


Figure 3: Department of Natural Resources Groundwater Use Restriction



Appendix A: Busch Memorial CA Lakes and Ponds

Lake	Acres	Use	Specialty Fishery	Proposed	Pond	Acres	Use
1	1	ARE/FF		ADA/SA	7a	0.3	MS
2	2	ARE/FF		RE	9A	1.5	MS/FF
3	3	ICF*/FF	PE/WT	SR	9B	0.8	MS/FF
4	2	ICF*/FF	BE	DB/SA	10	0.3	MS
5	3.4	ICF*	PE	ADA/SA/SR	11	0.2	MS/FF
6	18	MS/FF	BE/HSB	RE	16A	0.3	MS/FF
7	12	ICF/FF	BCF/FCF	ADA/SA	23A	0.3	MS
8	15.8	Dog training			23B	0.4	MS
9	3	MS	PE	DA/SR	23C	0.3	MS
10	3.5	MS	BE		26A	0.6	MS/FF
11	4.5	MS/FF	BE	SA	26B	0.8	MS/FF
12	4	ARE/FF		SR	27	0.2	MS
15	4	ARE/FF		ADA/SA	28	2.0	MS/FF
16	8.8	MS/C&R	BE		30	0.3	MS/FF
19	3.2	MS	PE		33A	1.0	MS
20	4.6	MS	PE	RE	33B	1.3	MS
21	5.7	MS/FF	BE/WT	SA/SR	35A	1.0	MS/FF
22	4.1	MS/FF	PE/WT	DA/DB	35B	0.9	MS/FF
23	4	ICF*/FF	BE/WT	SA/SR	36	0.3	MS
24	3.1	MS	BE		37A	0.8	MS/FF
26	1	MS	PE		37B	1.0	MS/FF
27	4.8	MS	PE	ADA/DB/RE	37C	0.6	MS
28	12	MS/FF	BE/HSB/	DB/SR	37D	0.4	MS
30	4.8	MS	PE				
31	19	MS/C&R	PE				
32	6	MS/C&R	BE	DA			
33	182	MS	BE/BCF/				
34	35	MS	BE/HSB				
35	62.5	MS	BE/MU				
36	15.5	MS	BE/HSB	SA			
37	32	MS	PE/HSB	RE			
38	12	MS	BE				
Hampton (Refuge)	12	ARE		RE/ADA			
Total	508.3A					16.3A	

Key					
Uses		Specialty Fishery		Proposed Improvements	
ARE	Aquatic Resource Education	BE	Bass emphasis	ADA	Disabled-angler access
C&R	Catch-and-Release only	BCF	Blue catfish	DA	Dam armoring
FF	Family-Friendly	FCF	Flathead catfish	DB	Dam backslope restoration
		HSB	Hybrid striped bass	RE	Renovation
ICF	Intensive catfish	MU	Muskie	SA	Shoreline improvement/ stabilization/angler access
MS	Multi-species	PE	Panfish emphasis	SR	Spillway restoration
*	Explore phased reduction of intensive catfish management	WT	Winter trout		

Appendix B: August A. Busch Memorial Conservation Area Management Plan Public Comments

Received during public comment period (May 1-31, 2015):

(computer shut down while I was making a comment yesterday). Re:Dust mitigation-long term. The dust generated by traffic on the road to lake 33, particularly on a week-end or holiday, during a dry period is not only a health issue, but is a driving hazard. Get behind a couple of pick up trucks on the way to lake 33, on a dry day, and only blind luck will prevent an accident. The dust generated during dry periods also can cause auto maintenance problems, like damaging gaskets, and water pumps, and seeps into everything on a car. Columbia Bottom CA has a long road, and it is paved, and only gravel on a small portion. It makes a big difference in enjoying the use of the area. Re:My suggestion of an additional entrance being built, to redistribute some traffic and thus reduce the dust on the main roads, instead of paving the road to 33, or the road to 34&35, I can't help but think something could be worked out with DOT. The service road connecting to highway 94, which goes by lake 11,(on the east side of Busch), or one of the service roads which connects to highway D (on the west/NW side of Busch) could be turned into an additional entrance to redistribute traffic and thus reduce the dust. I just don't buy the reasoning that there would be problems with DOT, or maintenance costs would be too high, to enact one of these suggestions.

It appears there is a reduction in agricultural fields. I believe more agriculture would be of benefit to the wildlife. In addition to burning woodlands it would be beneficial to do a timber harvest and some timber stand improvement.

Permitting horse back riding would expand public usage of the park.

Would be great if there were some trails for horse riding there

August A. Busch Memorial CA is, in many ways, the premier facility for residents of the St. Louis Area to experience the outdoors. While there are several public areas in the Greater St. Louis Area that offer equestrian opportunities there are also many horses and avid trail riders—riders willing to help install and maintain trails and associated infrastructure. Show-Me Missouri Back Country Horsemen want to encourage MDC to develop a multi-use trail network on Busch utilizing a combination of existing access routes and constructed trails in the relatively undeveloped northwest portion of the 6,987 acre CA.

“We recognize the high use of Busch by the public for hunting, fishing, outdoor education, and other nature activities. It is important, for safety reasons, to insulate the urban public from horses and riders. The relative concentration of the developed portion in the central, eastern and southern portions of the CA lends well to maintaining separation by placing most multi-use trails in the northwest portion—north of Dardenne Creek and north and west of Kraut Run Creek.”

“We also recognize and appreciate the heavy use of Busch by urban hunters during some seasons, so we recognize that it may be prudent to close the area to multi-use during parts of the hunting seasons.”

“Thank you for the opportunity to comment

I am a trail rider from the Troy area and frequently ride at Cuivre River State Park and Indian Camp Creek Park. I work with the Superintendent at CRSP to help maintain the trails there. I would love to have another area to ride nearby in St. Charles County and fully support, as a participating member, the statement by SMMBCH, as follows: “August A. Busch Memorial CA is, in many ways, the premier facility for residents of the St. Louis Area to experience the outdoors. While there are several public areas in the Greater St. Louis Area that offer equestrian opportunities there are also many horses and avid trail riders—riders willing to help install and maintain trails and associated infrastructure. Show-Me Missouri Back Country Horsemen want to encourage MDC to develop a multi-use trail network on Busch utilizing a combination of existing access routes and constructed trails in the relatively undeveloped northwest portion of the 6,987 acre CA. SMMBCH offers to partner with the Department to plan, layout, install and maintain a trail network.”

“We also recognize and appreciate the heavy use of Busch by urban hunters during some seasons, so we recognize that it may be prudent to close the area to multi-use during parts of the hunting seasons.”

Please allow for equestrian multi-use trails as described by SMMBCH proposal “Expanding Public Land Multi-Use Trails in Missouri.” Not only would this server the public in that sector but I also believe that exposure and opportunity to horses by our youth is important in their growth and well roundness just like hunting, fishing and other outdoor activities. I ride most of the St. Louis area trails including 66 park and Queeny and have had many positive interactions with non-riders some will hopefully become riders themselves.

I feel the Busch Area is ideally suited for horseback trail riding. There is not only ample parking, a barn with tie stalls and a restroom facility, but a very good and large trail system in place. The bunker roads are ideal for trails and with a little clean up there would be miles of trails to use that would have no effect on the farming operation already in place out there. I feel certain it would be a great asset to the local area as well as a outstanding use of our state conservation area.

First, thank you for the opportunity to comment on the August A. Busch Memorial CA Draft Management Plan. Busch Memorial CA is, in many ways, the premier facility for residents of the St. Louis Area to experience the outdoors. While there are several public areas in the Greater St. Louis Area that offer equestrian trail opportunities there are also many horses and avid trail riders—riders willing to help install and maintain trails and associated infrastructure. The Busch Memorial CA is listed as a viable option for trail development in the 2015 SMMBCH proposal, “Expanding Public Land Multi-Use Trails in Missouri;” it would provide a needed riding opportunity in underserved St. Charles County. Show-Me Missouri Back Country Horsemen want to encourage MDC to develop a multi-use trail network on Busch utilizing a combination of existing access routes and marked primitive trails with a mineral soil tread surface in the relatively undeveloped, northwest portion of the 6,987 acre CA. SMMBCH offers to partner with the Department to plan, layout, install and maintain such a trail network.

We recognize the high use of Busch by the public for hunting, fishing, outdoor education, and

other nature activities. It is important, for safety reasons, to insulate the urban public from horses and riders. The relative concentration of the developed portion in the central, eastern and southern portions of the CA lends well to maintaining separation by placing most multi-use trails in the northwest portion—north of Dardenne Creek, north and west of Kraut Run Creek, and along the west side of the CA. Access trailheads for the multi-use trails could be located off Routes D and DD, maintaining separation from other users and minimizing chances of conflict.

We also recognize and appreciate the heavy use of Busch by urban hunters during some seasons, so we recognize that it may be prudent to close the area to multi-use during parts of the hunting seasons.

Finally we would like to make the point that thousands of Missouri citizens and taxpayers endure physical challenges that make hiking and biking impossible. Their only means of getting off the road—without a motorized vehicle—is on a horse or mule. Many such members of the equestrian community treasure their ability to enjoy Missouri's rich outdoors in this way. Thank you again for the opportunity to comment, and thank you for your consideration.

I thank those responsible for the efforts by those within the MDC that have helped in making the Busch area a better place for all.

The Department acknowledges increasing use and traffic, yet continues to keep approximately 1/2 of the roads at the Busch Area closed to the general public. This was not always the case at Busch and this only increases potential for conflict.

MDC area Managers have been told to "de-infrastructure" their respective areas to help reduce costs to maintain. How narrow and short sighted. \$10.5 million dollars for a classroom and a few more trap/skeet fields and MDC feels the answer is to close even more roads?

Lake "improvements" have little to no input from end users. Fisheries biologists and other staff make uninformed decisions about how best to "improve" lakes. These improvements often make lakes unusable or of little value to certain interests such as for Retriever use.

MDC has taken away many of the best Retriever lakes and has altered in a negative manner many if not most of the remaining lakes of any value for Retriever use. Lakes that once were "adopted" by Retriever groups have been taken away by MDC without regard to the Retriever community.

In place, MDC has given the Retriever users a lake of virtually no use in its current configuration. Last summer MDC assured us that this "new" lake would be made better relatively soon and that it could be "lowered" during winter of 2014-15. Now we are being told to wait and it "should" happen in 2015-16.

I liken this to how the Government told a special interest group aka Native Americans to "not worry, the Government was here to help and take care of them", and then moved them into the Desert. Lake 8 is our Desert.

Not allowing other uses on key lakes such as 1, 2, 15 when not being used by group fishing activities is under-utilization of a valued resource.

Lake 5 at one time was a Retriever Priority lake. Now it is not even open to Retrievers for much of the year. The list goes on and on.

Remaining lakes have unsafe shorelines, large amounts of trash, fishhooks and line. They also have had "fish structure" dumped in areas and locations that ruin there "Retriever Appeal".

Most MDC areas around the state have ample parking lots. The Busch area has them almost exclusively at lakes. Parking on roadsides puts vehicles and their contents in possible harms way. Any vehicles left open so that dogs don't overheat are overwhelmed with road dust. Conservation agents also have harassed Retriever trainers for not parking in parking lots. How far is too far?

MDC generates a considerable amount of revenue from contracts with farmers to grow row crops on MDC lands. This allows MDC to use less labor to "manage" these fields while netting a nice profit. The state of Missouri does not need MDC to grow large fields of row crops planted in soybeans, wheat and corn to benefit wildlife. Enough already exists around the state. Small food plots should be sufficient.

Likewise trees. The Busch area is already predominantly covered in trees. Many fields and lakes have been overgrown with trees that have not been kept in check and are now out of control and have "taken over" many areas making them less usable by Retriever groups, fisherman, hikers and other interests.

An inadequate number of fields are allowed to be left in grasses or natural native cover. These are too often allowed to grow too tall as to be of little to no value for Retriever use. Currently almost all grass fields are too tall as to be of any value to Retriever users, yet there are no plans to cut, mow, burn or otherwise reduce cover height until after July.

MDC and the farmers involved in planting row crops continue to apply chemicals around lakes and roadsides as well as in fields with no notification of general public. This is unacceptable.

MDC has too many areas such as Weldon Spring that are not allowed for Retriever events while others that are not suitable are considered as "field trial" areas. Why?

When MDC speaks of the history of the Busch area the conveniently neglect to mention why Mrs. Busch contributed so much to the original purchase and the families ties to and significance of (Retriever) field trials.

Sorry for the quick rambling rant. Very frustrated as I am in another state judging a Retriever event on superior Retriever grounds that are state owned in a neighboring state. With MDCs budget I find this a shame. Did I mention \$10.5 million for a classroom and a few more trap fields? No money? Really?

I would like to see the area reviewed and equestrian trails developed. I feel that with the large amount of acreage at Busch that trails could be shared or constructed for equestrian use. There are miles of gravel road that would be perfect to ride in wet weather. Some of these roads could be designated for equestrian use especially on the northwest side of the area. I realize that there could be a need to close the trails during hunting season. I would be happy to help with the construction of the trails if notified or even with the planning process.